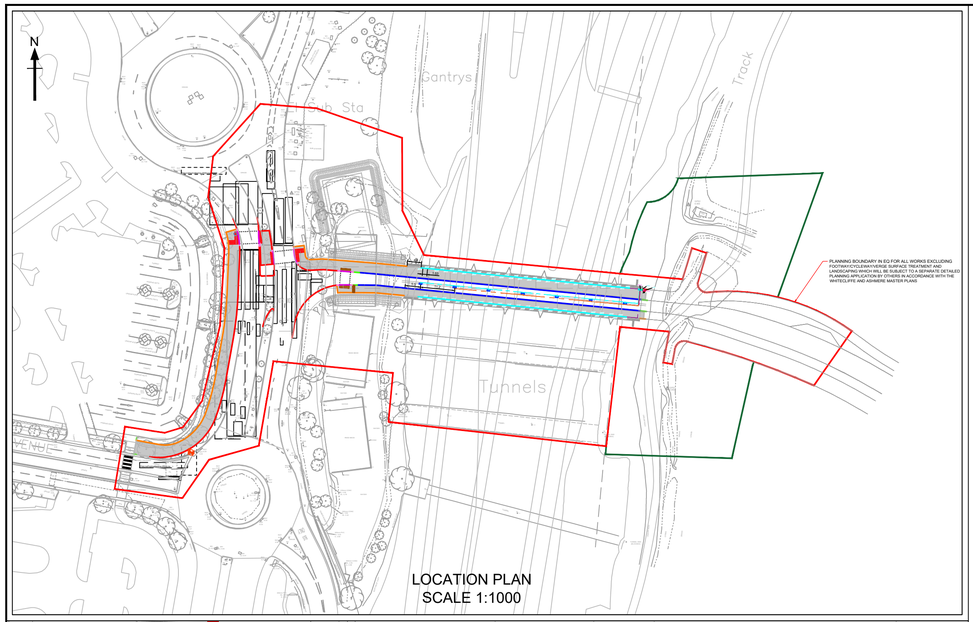
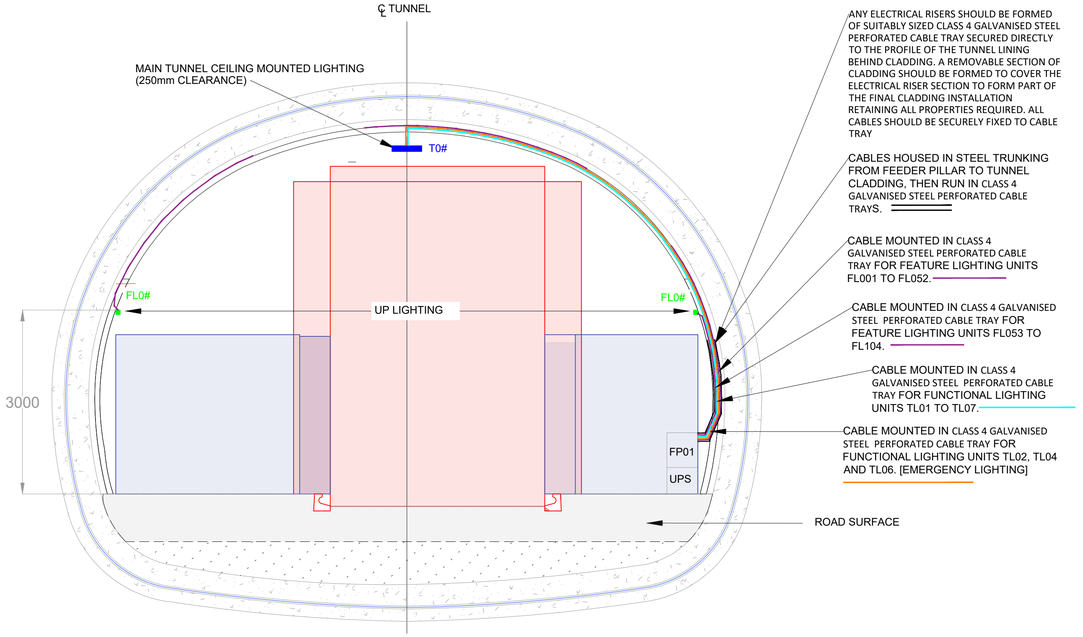

N
Gantrys
Track
Tunnels
PLANNING BOUNDARY IN RED FOR ALL WORKS EXCLUDING FOOTWAYS/CYCLEWAYS/VERGE SURFACE TREATMENT AND LANDSCAPING WHICH WILL BE SUBJECT TO A SEPARATE DETAILED PLANNING APPLICATION BY OTHERS IN ACCORDANCE WITH THE WASTE/LIFE AND ASHFORD MASTER PLANS

LOCATION PLAN
SCALE 1:1000


℄ TUNNEL
MAIN TUNNEL CEILING MOUNTED LIGHTING (250mm CLEARANCE)
T0#
FL0#
UP LIGHTING
FL0#
3000
FP01
UPS
ROAD SURFACE
ANY ELECTRICAL RISERS SHOULD BE FORMED OF SUITABLY SIZED CLASS 4 GALVANISED STEEL PERFORATED CABLE TRAY SECURED DIRECTLY TO THE PROFILE OF THE TUNNEL LINING BEHIND CLADDING. A REMOVABLE SECTION OF CLADDING SHOULD BE FORMED TO COVER THE ELECTRICAL RISER SECTION TO FORM PART OF THE FINAL CLADDING INSTALLATION RETAINING ALL PROPERTIES REQUIRED. ALL CABLES SHOULD BE SECURELY FIXED TO CABLE TRAY
CABLES HOUSED IN STEEL TRUNKING FROM FEEDER PILLAR TO TUNNEL CLADDING, THEN RUN IN CLASS 4 GALVANISED STEEL PERFORATED CABLE TRAYS.
CABLE MOUNTED IN CLASS 4 GALVANISED STEEL PERFORATED CABLE TRAY FOR FEATURE LIGHTING UNITS FL001 TO FL052.
CABLE MOUNTED IN CLASS 4 GALVANISED STEEL PERFORATED CABLE TRAY FOR FEATURE LIGHTING UNITS FL053 TO FL104.
CABLE MOUNTED IN CLASS 4 GALVANISED STEEL PERFORATED CABLE TRAY FOR FUNCTIONAL LIGHTING UNITS TL01 TO TL07.
CABLE MOUNTED IN CLASS 4 GALVANISED STEEL PERFORATED CABLE TRAY FOR FUNCTIONAL LIGHTING UNITS TL02, TL04 AND TL06. [EMERGENCY LIGHTING]

NEW TUNNEL PROPOSED SECTION
SCALE 1:50

Notes

1. THIS IS AN AUTOCAD DRAWING AND SHOULD NOT BE AMENDED BY HAND.
2. THE EXISTING LOCATIONS ARE APPROXIMATE AND THEIR ACCURACY CANNOT BE GUARANTEED.
3. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.
4. ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATION FOR WORKMANSHIP AND MATERIALS.
5. THIS DRAWING MUST NOT BE SCALED.
6. DRAWING TO BE READ IN CONJUNCTION WITH OTHER CONTRACT DOCUMENTS.
7. PROPOSED LOCATIONS TO BE CHECKED AGAINST UTILITY DRAWINGS FOR CONFLICTS BY A COMPETENT ENGINEER.
8. CONTRACTOR SHOULD SATISFY THEMSELVES THAT ANY UTILITY DRAWINGS AFFECTING THE SCHEME ARE ACCURATE AND UP TO DATE PRIOR TO COMMENCEMENT.
9. ALL ELECTRICAL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH BS 7671 IET WIRING REGULATIONS 18TH EDITION.
10. CONTRACTOR TO LIAISE WITH DISTRIBUTION NETWORK OPERATOR PRIOR TO COMMENCEMENT OF WORKS.
11. HAND DUG TRIAL HOLES ARE TO BE CARRIED OUT ON SITE TO CONFIRM THE SUITABILITY OF FEEDER PILLAR LOCATIONS PRIOR TO COMMENCEMENT OF WORKS.
12. MAINTENANCE NUMBERS ARE TO BE AGREED WITH KENT COUNTY COUNCIL PRIOR TO COMMENCEMENT OF WORKS.
13. FOR DETAILED COLUMN INFORMATION REFER TO SPECIFICATION APPENDICES DOCUMENT BRT-TG-XX-ZZ-SP-LI-1300.
14. FOR DETAILED STREET LIGHTING DUCT REQUIREMENTS REFER TO THIS DRAWING AND SPECIFICATION DOCUMENT BRT-TG-XX-ZZ-SP-LI-500.
15. FOR DETAILED PRODUCT AND ELECTRICAL REQUIREMENTS REFER TO THIS DRAWING AND SPECIFICATION APPENDICES DOCUMENT BRT-TG-XX-ZZ-SP-LI-1400.
16. FOR DIMMING REQUIREMENTS, SEE 'FEATURE AND FUNCTIONAL LANTERN DIMMING TABLES.
17. IT IS PROPOSED THAT ALL NEW COLUMNS ARE TO BE CONNECTED VIA A PRIVATE CABLE NETWORK (PCN).
18. FOR PCN DETAILS REFER TO DRAWING BRT-TG-XX-ZZ-DR-LI-1303, ELECTRICAL SCHEMATICS BRT-TG-XX-ZZ-DR-LI-1401 AND BRT-TG-XX-ZZ-DR-LI-1403.
19. FUNCTIONAL AND FEATURE TUNNEL LIGHTING UNITS TO BE CONTROLLED VIA DIGITAL ASTRO TIME SWITCH.

ELECTRICAL SUPPLY ABBREVIATIONS.

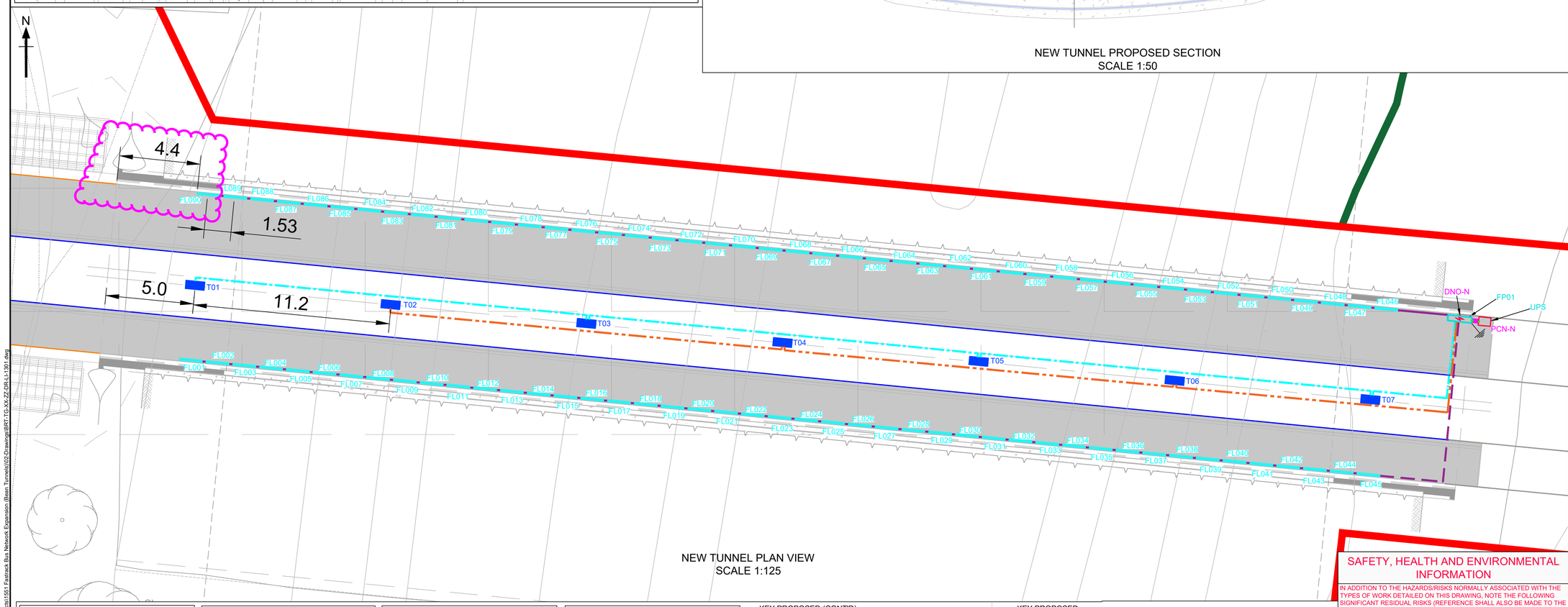
DNO-N DISTRIBUTION NETWORK OPERATOR [NEW CONNECTION]
PCN-N PRIVATE CABLE NETWORK [NEW CONNECTION]

Design Note:

BEAN TUNNEL
LIGHTING CLASS BS 5489-1:2013 TABLE 4 [ENCLOSED / DAY]
LIGHTING LEVELS [LUX]: EAVE = 350.0 / EMIN = 150.0

BEAN TUNNEL
LIGHTING CLASS BS 5489-1:2013 TABLE 4 [ENCLOSED / NIGHT]
LIGHTING LEVELS [LUX]: EAVE = 100.0 / EMIN = 50.0

BEAN TUNNEL [EMERGENCY]
LIGHTING CLASS CIE 88:2004 SECTION 8 [EMERGENCY LIGHTING]
LIGHTING LEVELS [LUX]: EAVE = 10.0 / EMIN = 2.0



NEW TUNNEL PLAN VIEW
SCALE 1:125

FUNCTIONAL LIGHTING ON UPS		
EQUIPMENT ID	ON / OFF	LIGHTING CLASS ACHIEVED
T01	OFF	N/A
T02	ON	CIE 88:2004
T03	OFF	N/A
T04	ON	CIE 88:2004
T05	OFF	N/A
T06	ON	CIE 88:2004
T07	OFF	N/A

FEATURE LIGHTING DIMMING TABLE - DAYTIME		
EQUIPMENT ID	DIM TO %	LIGHTING CLASS ACHIEVED
FL001 TO FL104	90	N/A

FEATURE LIGHTING DIMMING TABLE - NIGHTTIME		
EQUIPMENT ID	DIM TO %	LIGHTING CLASS ACHIEVED
FL001 TO FL104	30	N/A

FUNCTIONAL LIGHTING DIMMING TABLE - DAYTIME		
EQUIPMENT ID	DIM TO %	LIGHTING CLASS ACHIEVED
T01	90	BS5489-1:2013 - TABLE 4 [DAY]
T02	90	BS5489-1:2013 - TABLE 4 [DAY]
T03	90	BS5489-1:2013 - TABLE 4 [DAY]
T04	90	BS5489-1:2013 - TABLE 4 [DAY]
T05	90	BS5489-1:2013 - TABLE 4 [DAY]
T06	90	BS5489-1:2013 - TABLE 4 [DAY]
T07	90	BS5489-1:2013 - TABLE 4 [DAY]

FUNCTIONAL LIGHTING DIMMING TABLE - NIGHTTIME		
EQUIPMENT ID	DIM TO %	LIGHTING CLASS ACHIEVED
T01	30	BS5489-1:2013 - TABLE 4 [NIGHT]
T02	30	BS5489-1:2013 - TABLE 4 [NIGHT]
T03	30	BS5489-1:2013 - TABLE 4 [NIGHT]
T04	30	BS5489-1:2013 - TABLE 4 [NIGHT]
T05	30	BS5489-1:2013 - TABLE 4 [NIGHT]
T06	30	BS5489-1:2013 - TABLE 4 [NIGHT]
T07	30	BS5489-1:2013 - TABLE 4 [NIGHT]

KEY PROPOSED (CONT'D)

QTY.	SYMBOL	DESCRIPTION
1	FP01	PROPOSED FEEDER PILLAR WITH SINGLE PHASE DNO SUPPLY.
	100mm	PROPOSED **3 CORE 16mm² CU/XLPE/PVC/SWA/PVC** CABLE TO BE LAID IN **100mmØ UPVC-TWIN WALLED HDPE ORANGE COLOURED DUCT** [FEEDER PILLAR TO UPS]. QUANTITY: APPROX 5m
		INDICATIVE ROUTE FOR PROPOSED CABLING FROM FEEDER PILLAR TO TUNNEL LIGHTING FOR EMERGENCY OPERATION. **FP PLUS 2.5mm² Cu / 4 CORE (WHITE)** QUANTITY: APPROX 70m
		INDICATIVE ROUTE FOR PROPOSED CABLING FOR FUNCTIONAL TUNNEL LIGHTING. **FP PLUS 2.5mm² Cu / 4 CORE (WHITE)** QUANTITY: APPROX 75m
		INDICATIVE ROUTE FOR PROPOSED CABLING FOR FEATURE TUNNEL LIGHTING. **FP PLUS 2.5mm² Cu / 3 CORE (WHITE)** AND **MANUFACTURES SUPPLIED LEADER AND JUMPER CABLES**. QUANTITY: APPROX 40m

KEY PROPOSED (CONT'D)

QTY.	SYMBOL	DESCRIPTION
1		EARTH ELECTRODE OR MAT

KEY PROPOSED

QTY.	SYMBOL	DESCRIPTION
7	T0#	PROPOSED SIGNIFY TUBEPOINT GEN2 LARGE LED LIGHTING UNIT. CEILING MOUNTED VIA MBA CEILING BRACKET [LUMINAIRE TO BE AIMED VERTICALLY DOWNWARDS] LANTERN REF:- BGP237_TUBEPOINT GEN2 LARGE_LED_4000K_78000 LUMEN_OPTIC DNS11_DALI_475W
90	FL###	PROPOSED COLOR KINETICS COLORGRAZE MX4 POWERCORE LED LIGHTING UNIT. BRACKET MOUNTED AT A HEIGHT OF 3.0m ON THE INSIDE OF TUNNEL [LUMINAIRES TO BE AIMED 30° FROM VERTICAL TOWARDS THE TUNNEL CENTRE] LANTERN REF:- COLORGRAZE MX4 POWERCORE_LED_ RGBW_ 323.6 LUMEN (BLUE)_OPTIC 30°X 60°_DMX_92W_1219MM
1		PROPOSED EMERGENCY UPS FROM SPECIALIST POWER, COMPRISING OF; -GROUND MOUNTED ALPHA ATROX 55_2000w 60AH IP55 CABINET -ALPHA FXM HP 2000 RUGGED UPS MODULE COMES WITH ALPHACELL GEL BATTERIES.
1		PROPOSED CHAMBER

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE TO THE DESIGN RISK ASSESSMENT BRT-TG-XX-ZZ-RA-LI-0001).

CONSTRUCTION:

- CONTRACTOR TO BE AWARE AND CAUTIOUS OF **UNDERGROUND HIGH VOLTAGE (HV) ELECTRICITY CABLES** WITHIN THE VICINITY OF THIS SCHEME.
- CONTRACTOR TO BE AWARE AND CAUTIOUS OF **ELECTRICITY SUB STATIONS** WITHIN THE VICINITY OF THIS SCHEME.

MAINTENANCE/CLEANING:

- CONTRACTOR TO BE AWARE AND CAUTIOUS OF **ELECTRICITY SUB STATIONS** WITHIN THE VICINITY OF THIS SCHEME.
- CONTRACTOR TO BE AWARE AND CAUTIOUS OF **UNDERGROUND HIGH VOLTAGE (HV) ELECTRICITY CABLES** WITHIN THE VICINITY OF THIS SCHEME.

USE:

NONE

DECOMMISSIONING/DEMOLITION:

AS PER CONSTRUCTION

THE CONTRACTOR IS TO SATISFY HIMSELF OF ALL UNDERGROUND NETWORKS PRIOR TO ANY DIGGING, THE CONTRACTOR IS TO MAINTAIN CABLE NETWORKS OF ALL EQUIPMENT THAT IS NOT PART OR THE WORKS BUT MAY BE FED FROM EQUIPMENT ASSOCIATED WITH THE WORKS.

STATUS	REV	AMENDMENT DESCRIPTION	DATE	CAD	CHKD	APPD
S3	P05	Feature Lighting Setout Dimensions Changed	22.09.2021	SW	GH	AL
S3	P04	Quantities Of Feature Lighting Units Changed	09.09.2021	SW	KS	AL
S3	P03	UPS Specification Amended And Cable Types Added	16.06.2021	SW	GH	AL
S3	P02	Base Models Updated	04.05.2021	SW	GH	AL

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CLIENT
Tony Gee

PROJECT
BEAN TUNNEL

DRAWING TITLE
LIGHTING AND DUCT LAYOUT

DESIGNED	CAD	CHECKED	APPROVED
AE	SW	GH	AL
DATE DESIGNED	SHEET	SCALE	SHEET SIZE
MAR 2021	1 of 1	AS SHOWN	A1

DRAWING NUMBER
PROJECT -ORIGINATOR -VOLUME -LOCATION -TYPE -ROLE -NUMBER
BRT-TG-XX-ZZ-DR-LI-1301

JOB NUMBER	STATUS	REVISION
BRT	S3	P05

DFL CAD FILE: C:\Users\...\Documents\Designs for Lighting Ltd\DFL - Documents\Design\Projects\1551 Fastrack Bus Network Expansion (Bean Tunnel)\02-Drawings\BRT-TG-XX-ZZ-DR-LI-1301.dwg